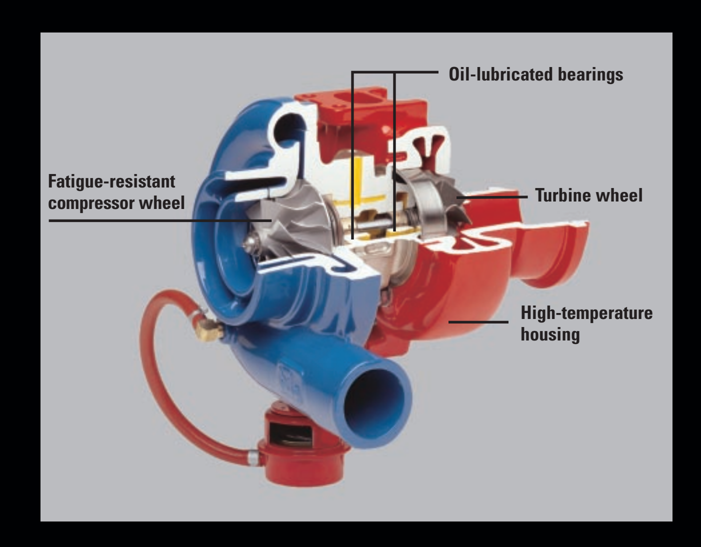
Turbochargers



Caterpillar turbochargers are designed, manufactured, and tested to ensure they are of the highest quality, keeping your engine running at maximum efficiency.

Built to meet your engine's demands and lower your costs through remanufacturing

Turbochargers play a critical role inside Caterpillar® engines. Cat® turbochargers are designed, manufactured, and tested to withstand extreme conditions—temperatures as high as 1300°F and wheel rotating speeds that approach 120,000 rpm.

At repair/replacement time, we'll help you select the right Caterpillar turbocharger for your particular engine and application. By installing the Cat turbocharger that's been performance-matched to your specific requirements, you'll increase engine productivity, fuel efficiency, and horsepower.

Plus, to help you reduce downtime and costs, we offer Cat Reman Turbochargers and Cartridges. These factory-balanced components offer you same-as-new performance and long life at a fraction-of-new price.



Turbochargers

Cat turbochargers deliver top performance and long life in your application

Caterpillar turbochargers are designed, manufactured, and tested to withstand the extreme conditions inside your engine. By selecting the correct turbocharger for your application and following proper maintenance techniques, you can help ensure maximum turbocharger and engine efficiency.

Performance-matched designs ensure top performance

Caterpillar matches its turbochargers to specific engine requirements—ensuring that the Cat turbocharger you install delivers maximum performance and life in your application. Each Cat turbocharger features:

- high-quality components—including a high-efficiency, broad-range air flow compressor; high-response turbine; custom-selected compressors and turbines for optimum air flow efficiency, pressure ratio, and transient performance; engine-oil-lubricated hydrodynamic bearings; and high-temperature turbine housing and wheel alloys.
- a long-lasting design—including rugged radial-wheel construction, non-contact labyrinth seals, and fatigue-resistant compressor wheel alloys and construction.

Stringent testing maximizes life

Caterpillar performs the most stringent turbocharger qualification tests in the industry—including structural, dynamic, and durability tests. These tests monitor fuel consumption, response time, torque rise, and heat rejection.

Proper maintenance helps you avoid failure

Low power, hard starting, and black smoke are the first indicators of turbocharger problems. Most are the result of improper maintenance or hostile working and environmental conditions.

- *Low oil pressure or blockage* in the oil inlet line may result in a lack of lubrication, which can in turn cause bushing wear and weaken or break the center shaft.
- *Foreign material* in the turbocharger can cause damage to the leading edges of blades, which may result in wheel separation or bending of the center shaft.
- *Overfueling* may lead to high exhaust temperatures, which can cause the center housing to reach temperatures above 1000°F, carburizing oil, oxidizing parts, and increasing bearing wear.
- *Abrasives in oil* (contamination) may result in scoring of the journal and thrust bearings, causing accelerated bearing wear and premature failure.

Inspecting your turbocharger at regular service intervals and following proper operating and maintenance techniques will help you eliminate these problems.

Cat Diesel Engine Oil protects your turbocharger and engine

The largest percentage of turbocharger failures are oil-related—caused by dirty or contaminated oil. You can help protect your turbocharger and engine from premature failure with Cat Diesel Engine Oil.

- *Excellent soot dispersancy* provides maximum control of deposits and wear to extend turbocharger and engine life. Less downtime lowers your owning and operating costs.
- *Outstanding oxidation stability* protects against undue oil thickening during drain period. (Oil thickening inside the oil drain may force the oil out the turbine and compressor seals.)
- *High detergency level* ensures superior engine and turbocharger cleanliness, even at extended oil drain intervals.

We can help you determine the right oil for your engine, or you can refer to your Operation and Maintenance Manual.

Reman Turbochargers and Cartridges reduce downtime and costs

When you need repairs, Cat Reman components get you back to work quickly, reliably, and affordably. Like our new turbochargers, Cat Reman Turbochargers and Cartridges are performance-matched to your engine and application.

Factory-balanced cartridges

Cat Reman Turbochargers and Cartridges are dynamically balanced to ensure same-as-new performance and life. First, individual piece parts are balanced and assembled; then the cartridge assembly is spin-balanced.

Other manufacturers often just balance piece parts and then assemble them into a group, which can result in an inconsistently balanced assembly. Caterpillar's cartridge-balanced process increases reliability and life.

Strict remanufacturing processes

- All critical surfaces and dimensions are tested to ensure they meet original performance specifications.
- Quality audits are performed throughout the remanufacturing process.
- Center housings are tested for seal integrity.
- All bearings and seals are replaced to ensure long life and top performance.

Fully warranted, low-cost repair options

Available off the shelf to reduce your downtime, Cat Reman Turbochargers and Cartridges are priced at a fraction of the cost of new parts and come with a same-as-new parts warranty.

In addition, you can earn credit toward Cat Reman Turbochargers and Cartridges by exchanging used Cat turbochargers and cartridges (cores). To determine core credit level, we use simple, visual tests that don't require special tools or disassembly. This allows us to provide an immediate decision on core condition and credit, so you don't have to wait for—or guess about—repair costs.



Commitment of service and support

When your engine needs service, our professional technicians have the training and tools to get you back to work quickly. We provide off-the-shelf component availability backed by the Caterpillar worldwide parts network.

Give us a call or drop by our parts counter. We'll show you how we can help lower your owning and operating costs with the highest quality engine components, a wide range of Exchange parts (including Cat Reman components), and the most comprehensive service and support available.

For more information, see us today or visit the Caterpillar website at www.CAT.com



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